

Developing the Berkeley-Leiden Adult
Attachment Questionnaire (BLAAQ)

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Abstract

A self-report adult and adolescent attachment inventory is being developed jointly at Berkeley and in Leiden, Holland. Two pilot runs at Berkeley have been succeeded by administration to students at Leiden, Berkeley and Auburn, Alabama (700 students in total). Scales representing dismissing, preoccupied and traumatized states of mind with respect to attachment, as well as several cognitive scales and several representative of experience were refined in a development sample in Leiden and show high internal consistency (alpha) in the Berkeley, Auburn and remaining Leiden samples. In the most recent runs both the Dutch and American samples revealed the following expected relations among variables: (1) positive correlations between preoccupied and traumatized states of mind; (2) positive correlations between preoccupied states of mind and unusual belief systems, as, astrology and spiritualism; and (3) negative correlations between the ability to divide attention among several activities and a traumatized state of mind. We are currently testing a refined instrument against both the adult attachment interview and infant strange situation behavior in Berkeley and in Leiden, Holland.²

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A self-report adult (and adolescent) attachment inventory, the Berkeley-Leiden adult attachment questionnaire (BLAAQ) is being developed jointly at Berkeley and in Leiden, Holland (Main, Hesse & Van IJzendoorn, in preparation). The inventory takes as its basis recent advances in attachment research which have increased our understanding of attachment-related representational processes in adults. Specifically, the Berkeley adult attachment interview (George, Kaplan & Main, 1985) has permitted classification of adult states of mind with respect to attachment into four major categories (secure, dismissing, preoccupied, traumatized). The collection and analysis of aai data is, however, time-consuming and expensive.

In contrast to the AAI, the BLAAQ is unlikely to be applicable to the classification of individuals, and hence unlikely to be useful in the study of small samples of individuals. However, it is our hope that it may (1) serve as a screening instrument and (2) provide a vehicle for testing relations between attachment organization and variables which require large samples for sufficient statistical power. While not intended as a replacement for the AAI, the approach is similar in that it aims to discriminate individuals specifically in terms of state of mind with respect to attachment. Many of the items are subtle and indirect in presentation (see Figure 1).

A short, pilot version of the instrument was administered in Berkeley to two relatively large groups of college sophomores. In the second pilot run, a small number of students receiving extreme scores were administered the adult attachment interview with promising results. In these and later runs we found that a set of self-classifications descriptive of differing kinds of relationships with mother and father were unstable, and had only weak relations to the scales.

The instrument presently consists of 117 likert-type items, to be circled from -3, strongly disagree, to +3, strongly agree. The biographical scales concern *overall states of mind with respect to attachment* and *attachment-related experiences with the mother*, (experiences with the father were not considered in these early runs only in the interests of saving respondent time). Cognitive scales include *unusual beliefs*, *ability to divide attention among activities*, and *spatial orientation*. Specific hypotheses relating the cognitive and biographical scales were tested.

Methods

Subjects and procedures Psychology students (N=116) from two universities in the United States (Berkeley, California and Auburn, Alabama) and educational psychology students (N=118) from Leiden University, Holland, served as subjects. The Dutch subjects were older than the American subjects (28 vs 20 Yrs), and subjects in both the Dutch and American samples were predominantly female (79% and 68%). The Berkeley subjects completed the BLAAQ in one two-hour classroom session, while Auburn and Leiden subjects completed the BLAAQ in two different sessions.

Statistical analysis We took a deductive approach to scale construction, the items being based upon Main & Goldwyn's adult

attachment classification system as well as theoretically expected correlates of the four central categories. (Figure 1 describes some sample items from each of the scales).

Scale construction was based upon the Leiden sample, which was split into two parts. We applied a principal components analysis without rotation to each scale, and only items loading $> .30$ on the first factor were retained. These items were included in an alpha reliability check applied to the second half of the Dutch sample, and in this second phase no items were deleted from the scale. Finally, we tested the alpha reliability of the scales on the American samples.

Results and discussion

1. The preliminary results of our investigations are promising in that we are developing increasingly reliable scales (see Table 1). Alpha reliabilities for the scales are satisfactory in both countries.
2. Some cross-cultural trends may also be derived from Table 1. The American subjects report significantly more positive experiences with the mother, but also more preoccupying experiences than the Dutch subjects. The American subjects also score higher on preoccupied states of mind and on traumatized states of mind. Because the samples differ in age, these trends should be interpreted cautiously.
3. In the American samples, the BLAAQ scales were not related to age of subjects. In the Dutch sample - with more variation in age - older subjects appeared to indicate more anger and preoccupation, and fewer positive experiences with their parents. Males indicated less positive experiences with their parents and more dismissiveness than females, and also rated their spatial orientation abilities higher (see Table 2).
4. Table 3 displays the relations among the biographical scales in both the American and Dutch samples.

It should be noted, that a preoccupied state of mind with respect to attachment is related to unresolved trauma in both the Dutch and American samples. These findings were predicted, and are consistent with earlier reports associating disorganized/disoriented strange situation behavior specifically with the insecure-ambivalent infant attachment category. (Disorganized infant behavior is of course associated with traumatized states of mind in adults, while the insecure-ambivalent infant attachment category is associated with adult preoccupied states of mind.)

5. Our major hypotheses with respect to relations between the biographical and cognitive variables were affirmed (see Table 4). To select two:

- a. Evidence of heightened susceptibility to suggestion had been noted in adult attachment interview's conducted with preoccupied individuals, leading to the hypothesis that these individuals would be vulnerable to unusual belief systems. Subjects scoring high on preoccupied state of mind (angry) scale had more unusual beliefs in both the American and Dutch samples.

- b. Mary Ainsworth (personal communication) had suggested that the capacity for dividing attention in effective ways might be a correlate of secure attachment (see also Main, 1991). Recently, we proposed that this capacity might be especially compromised in traumatized individuals, who suffer a lapse of organized attachment strategies in the face of stressful situations (Main & Hesse, 1990) and who, relatedly, may need to remain vigilant. A negative relation between self-reported competency in dividing attention and a traumatized state of mind with respect to attachment was found in both the American and Dutch samples.

Present directions

The BLAAQ appears to be a promising instrument for research in adult and adolescent attachment, but it remains to be validated by comparison with established methods of discriminating attachment organization.

At this time, we are conducting and transcribing adult attachment interviews with the Berkeley students seen in the present study. Later this year, the BLAAQ will be administered to a 80 Dutch mothers who have already been seen in both the adult

attachment interview and the strange situation with their infants, and we hope to administer it to 15-year-olds this summer in conjunction with the adult attachment interview in Berkeley. Finally, the BLAAQ will also be refined further following administration to American mothers seen with their infants in the Ainsworth strange situation.

In sum, over the next two years, we will continue refinement of the theoretical-deductive approach taken to scale construction reported here. At the same time, a more empirical, multivariate approach will be taken to instrument refinement in conjunction with prediction of adult, late adolescent, young adolescent, and infant attachment organization.

References

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Table 1
Reliabilities and means of the BLAAQ-scales for the Dutch and USA-samples

BLAAQ scales	Holland		USA		N Items
	Alpha	Mean	Alpha	Mean	
<u>Biographical scales</u>					
<u>Experiences</u>					
Positive exp.	.70	4.7	.75	5.2***	10
Preoccupying exp.	.81	2.4	.89	2.6**	26
Rejecting exp.	.89	1.8	.89	1.9	6
<u>State of mind</u>					
Preoccupied (angry)	.76	2.8	.71	3.1***	13
Preoccupied (pass.)	.72	3.0	.72	3.3***	20
Dismissing	.68	3.8	.63	3.6**	12
Traumatized	.81	1.9	.82	2.3***	18
<u>Cognitive scales</u>					
Unusual beliefs	.69	1.7	.67	1.3**	5
Spatial orientation	.85	4.8	.83	5.2	6
Attention	.63	4.9	.76	4.9	7

Note: *p < .05 **p < .01 ***p < .001

Table 2
Age and sex differences on the BLAAQ-scales for the Dutch and USA samples

BLAAQ Scales	Age ¹		Sex ²			
			Holland		USA	
	r	r	Fem	Male	Fem	Male
<u>Biographical scales</u>						
<u>Experiences</u>						
Positive exp.	-.36**	-.04	4.8	4.3*	5.3	4.8*
Preoccupying exp.	.14	.03	2.4	2.5	2.6	2.8
Rejecting exp.	.28**	.03	1.7	2.1	1.8	2.2
<u>State of mind</u>						
Preoccupied (angry)	.29**	.01	2.8	2.9	3.1	3.2
Preoccupied (pass.)	-.17	-.03	3.1	2.9	3.3	3.1
Dismissing	.02	.06	3.7	4.2**	3.6	3.7
Traumatized	.16	.08	1.9	2.0	2.3	2.3
<u>Cognitive scales</u>						
Unusual beliefs	.14	-.06	1.8	1.6	1.3	1.2
Spatial orientation	.14	.14	4.6	5.4**	5.0	5.6*
Attention	.15	-.02	4.8	5.2	4.8	5.0

Note 1) Pearson correlations

2) Means for females and males

* p < .05 **p < .01

Table 3A
Correlations between biographical BLAAQ-scales (American sample)

Biographical scales	Experiences		State of mind			
	Preocc. (angry)	Rej. (pass.)	Preocc.	Preocc.	Dism.	Trauma
<u>Experiences</u>						
1. Positive exp.	-.59***	-.66***	-.54***	-.16	.17	-.45***
2. Preoccupying exp.		.50***	.75***	.39***	-.28**	.57***
3. Rejecting exp.			.38***	.05	-.05	.33***
<u>State of mind</u>						
4. Preoccupied (angry)				.39***	-.37***	.52***
5. Preoccupied (passive)					-.35***	.54***
6. Dismissing						-.28**
7. Traumatized						

Table 3B
Correlations between biographical BLAAQ-scales (Dutch sample)

Biographical scales	Experiences		State of mind			
	Preocc. (angry)	Rej. (pass.)	Preocc.	Preocc.	Dism.	Trauma
<u>Experiences</u>						
1. Positive exp.	-.49***	-.63***	-.56***	.12	-.04	-.22*
2. Preoccupying exp.		.52***	.65***	.33***	-.25**	.45***
3. Rejecting exp.			.51***	.13	-.08	.17
<u>State of mind</u>						
4. Preoccupied (angry)				.22*	-.37***	.54***
5. Preoccupied (passive)					-.29**	.47***
6. Dismissing						-.37**
7. Traumatized						

Note: * $p < .05$ ** $p < .01$ *** $p < .001$

Table 4A Correlations between biographical and cognitive BLAAQ-scales (American sample)

Biographical BLAAQ- scales	Cognitive BLAAQ-scales		
	Unusual beliefs	Attention	Spatial orientation
<u>Experiences</u>			
Positive exp.	-.07	.10	.09
Preoccupying exp.	.27**	-.25**	-.14
Rejecting exp.	.09	.05	.08
<u>State of mind</u>			
Preoccupied (angry)	.27**	-.11	-.12
Preoccupied (pass.)	.27**	-.51***	-.33***
Dismissing	-.44***	.15	.25**
Traumatized	.36***	-.39***	-.24**

Table 4B Correlations between biographical and cognitive BLAAQ-scales (Dutch sample)

Biographical BLAAQ- scales	Cognitive BLAAQ-scales		
	Unusual beliefs	Attention	Spatial orientation
<u>Experiences</u>			
Positive exp.	-.16	-.08	.00
Preoccupying exp.	.20*	-.05	.05
Rejecting exp.	.03	-.01	-.04
<u>State of mind</u>			
Preoccupied (angry)	.36***	-.05	.01
Preoccupied (pass.)	.03	-.51***	-.12
Dismissing	-.24**	.18	.01
Traumatized	.36***	-.33***	-.11

Note: * $p < .05$ ** $p < .01$ *** $p < .001$

FIGURE 1 Brief examples of items from BLAAQ scales

Biographical Scales

Positive experiences ("My mother was psychologically accessible to me during my childhood", "My mother was sympathetic with me when our family pet died")

Rejecting experiences ("My mother seemed cool and uninvolved with me", "My mother was unaffectionate and became even more so if I was distressed")

Preoccupying experiences ("My mother's moods were unpredictable", "My mother seemed to want me with her all of the time")

Angrily preoccupied state of mind (e.g., "Whenever I see my mother, she manages to upset me", "I am concerned about my mother's aging, because she is likely to become even more difficult and demanding")

Passively preoccupied state of mind ("My mother and I are like one person", "My mother loved me very much and I worry that I might not have lived up to her expectations")

Dismissing state of mind ("I would consider it fairly unusual for a person to have detailed memories from their childhood", "My mother may have done a few things I resent a little, but it certainly didn't affect my adult personality")

Traumatized state of mind ("There are some terrible memories which I wish to forget but cannot prevent from entering my waking or sleeping state", "I sometimes feel that something I did could have played a part in causing the death of someone I loved")

Cognitive Scales

Ability to divide attention ("I have no difficulty in dividing my attention among several activities", "When I watch complicated, e.g., sporting events, I can easily simultaneously take in new information and describe and explain what is going on to others")

Unusual beliefs ("I feel influenced by my time of birth, in the astrological sense", "I believe in spiritualism")

Spatial orientation ("I am good at finding my way around spatially -- I am a good navigator", "If I have been to a place once, I can usually find it again")